No. 822,748. PATENTED JUNE 5, 1906.

J. MARIS.

RADIATOR.

APPLICATION FILED APR. 26, 1905.

FIG. 5.

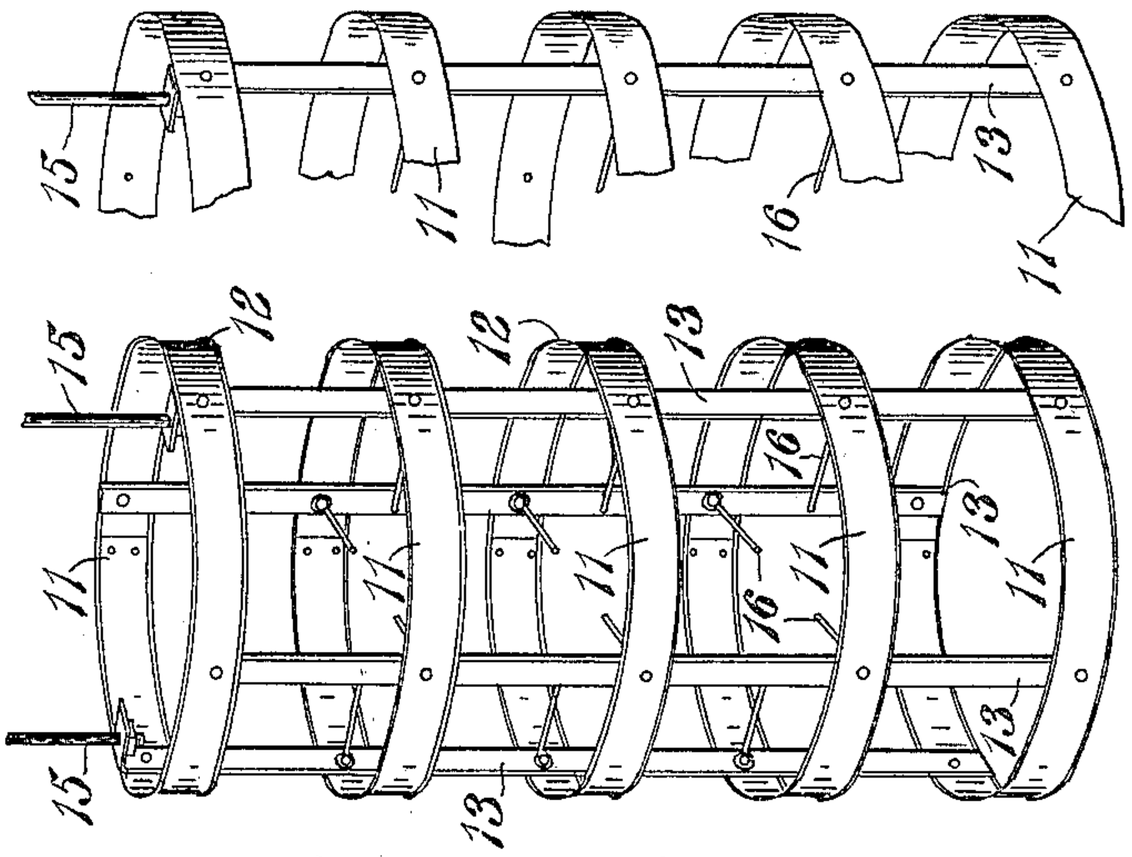

FIG. 4.

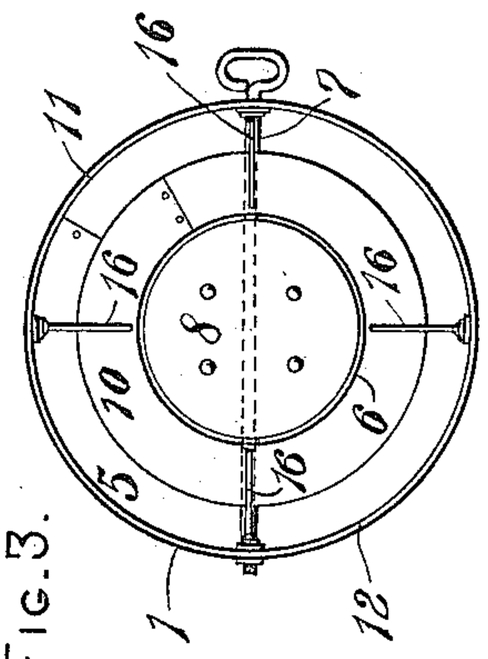

FIG. 3.

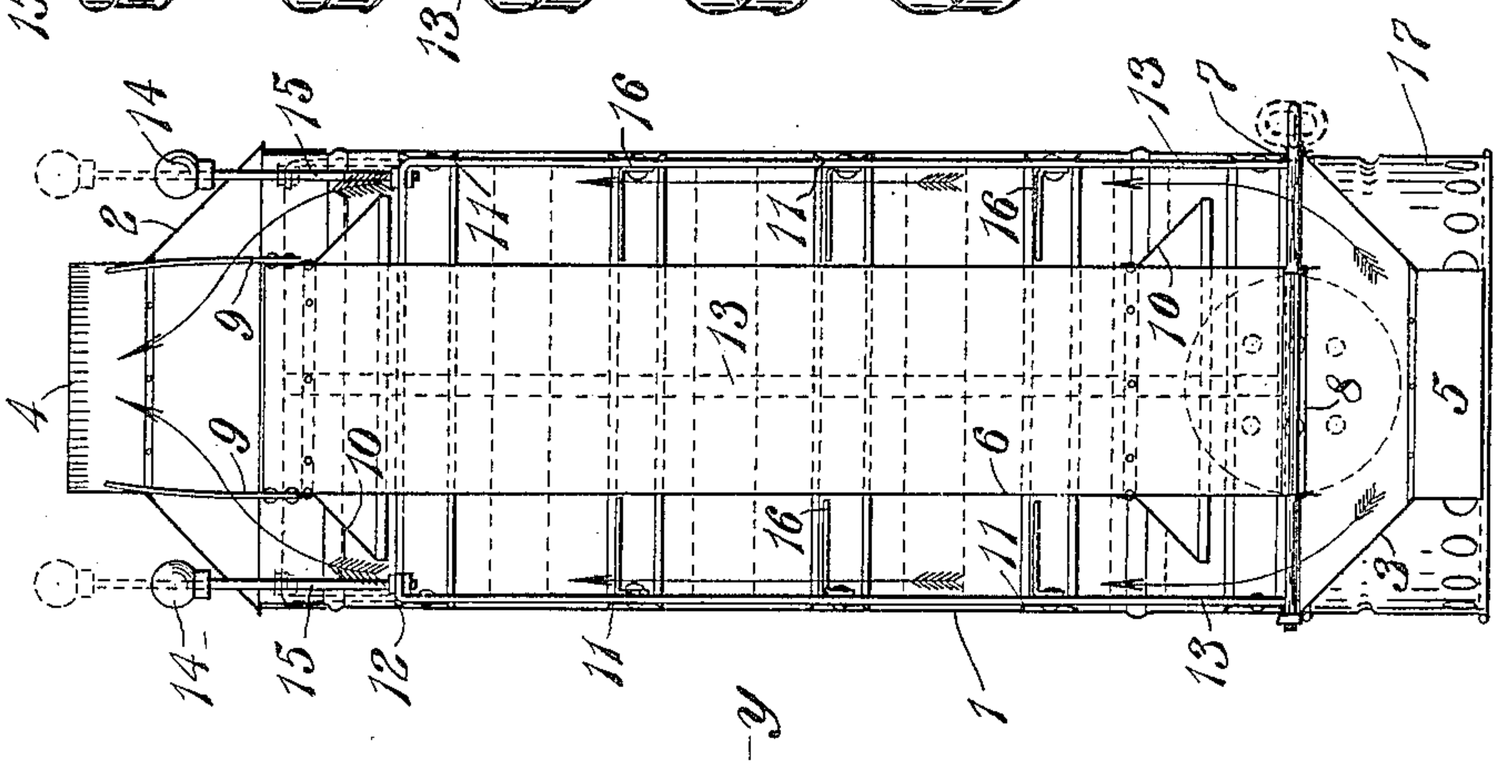

FIG. 2.

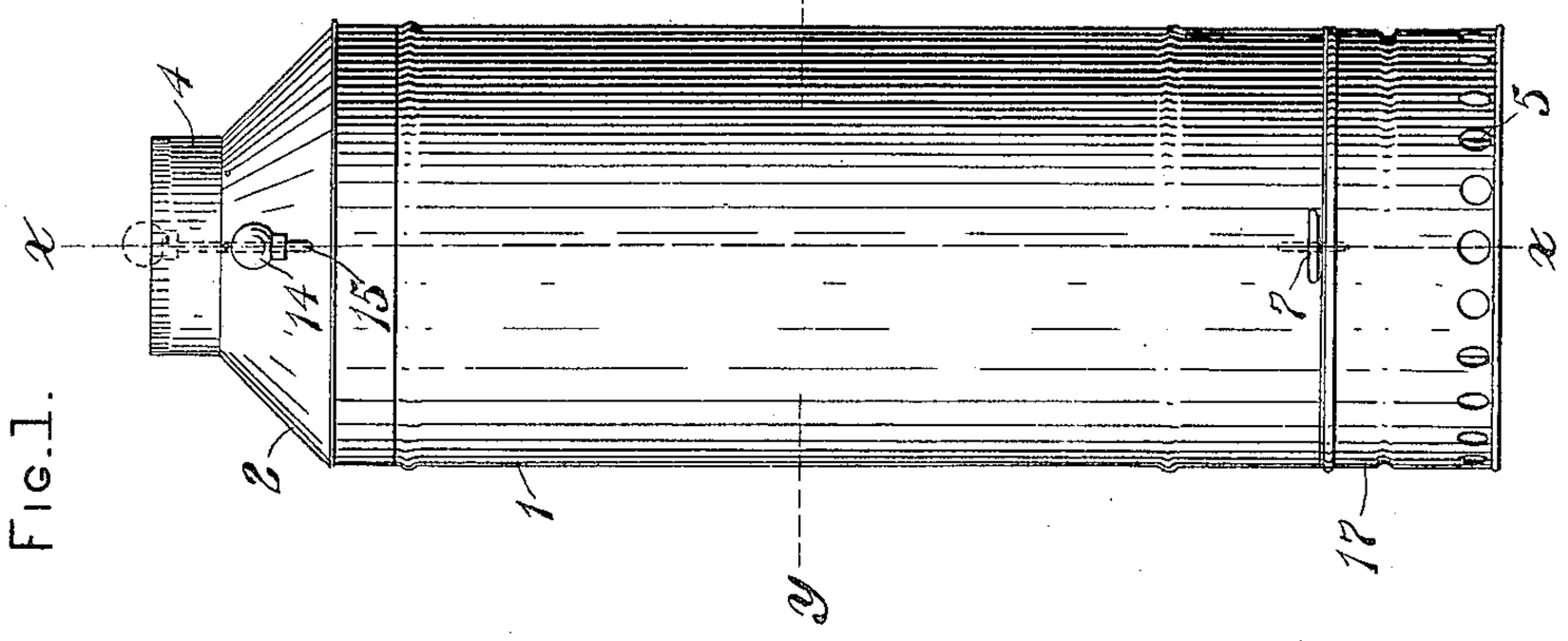

FIG. 1.

Witnesses:

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RADIATOR.

No. 822,748. Specification of Letters Patent. Patented June 5, 1906.

Application filed April 26, 1905. Serial No. 257,441.

To all whom it may concern:

Be it known that I, JARED MARIS, a citizen of the United States, residing at Sharonville, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Radiators, of which the following is a specification.

My invention relates to improvements in means for radiating heat.

The object of my invention is to provide simple, effective, and durable means for economizing, collecting, and radiating heat.

My invention consists of a drum having an interior flue, a damper to the interior flue to regulate the distribution of the draft, baffles extending from the interior flue to form a contracted flue-space adjacent the wall of the drum, a scraper engaging the wall of the drum and adapted to be shifted to remove any obstruction from the contracted flue-space, and tapered ends to the drum for guiding the products of combustion in their discharge therefrom.

My invention also consists in parts and in the combination and arrangement of parts, as herein set forth and claimed.

In the drawings, Figure 1 is a side elevation of my radiator. Fig. 2 is a vertical section on the line $x\,x$ of Fig. 1, the different positions of the scraper and of the damper being indicated by dotted lines. Fig. 3 is a section on the line $y\,y$ of Fig. 1. Fig. 4 is a perspective view of the scrapers. Fig. 5 shows in perspective a part of a modified construction of the scrapers.

I prefer to construct my improved radiator substantially as follows: The drum 1 is formed cylindrical with tapered ends 2 and 3, respectively, which are provided with collars 4 and 5, respectively, to connect the radiator to a stovepipe or other source of heat. An interior flue 6 is disposed vertically within the drum or radiator and is mounted upon and supported by the rod 7 of the damper 8, which holds its lower end in position. The upper end is held in position by means of suitable stays 9, adapted to extend into and engage the collar 4. Baffles 10 are secured to the outer wall of the interior flue 6 and are of less diameter than the drum, leaving an annular space for the passage of the products of combustion. The space between the baffles will form a lodging place for deposits from these products of combustion, which deposits will form an insulator around the interior flue and cause the heat to be saved for radiation. This is most desirable, since any heat that finds its way into the interior flue is lost by being carried directly upward and out of the interior flue. In order to prevent excessive accumulation of the deposits by which the contracted flue-space will be obstructed, agitators 16 are mounted upon the scrapers, extending radially therefrom into the space between the baffles. When the scrapers are operated to clean the drum, these agitators will act to dislodge the excess of deposit from the interior flue, which will be discharged by gravity or by the force of the draft, as the case may be. The scrapers 11, in the form of hoops, having flanges 12, rigidly secured to the upright bars 13, are arranged to engage the inner surface of the drum with their peripheries and be shifted up and down therein by means of handles 14 on stems 15, extending through the upper end of the drum. The tapered ends 2 and 3 are so formed as to facilitate the discharge of obstructions dislodged by the operation of the scrapers, whether this discharge be downward, due to gravitation, or whether it be upward, as the result of a strong draft through the contracted flue-space, as indicated by the arrows. The damper 8 is provided so that the interior flue 6 may be opened when for any reason the draft through the contracted flue-space is insufficient—as, for instance, when starting a fire or during unfavorable atmospheric conditions. A suitable base 17 is provided.

It will be apparent that my invention is capable of considerable modification without departure from the scope and spirit thereof—as, for instance, the scraper may be formed without flanges, as illustrated in Fig. 5.

I claim—

1. In a radiator, a drum, an interior flue in said drum, a damper to said interior flue, a baffle extending from said interior flue whereby a contracted flue-space is formed adjacent to the wall of the drum, a scraper composed of a series of hoops adapted to bear against the inner wall of said drum, and means for operating said scraper.

2. In a radiator, a drum, a scraper adapted to engage the interior wall of said drum, an agitator projecting inwardly from said scraper, and means for shifting said scraper.

3. In a radiator, a drum having a tapered end, a collar upon said end, an interior flue for said drum, a damper to said flue, a rod for said damper forming a support for said inte-

rior flue, and stays on said interior flue adapted to hold said interior flue in position.

4. In a radiator, a drum, a tapered end on said drum, a collar on said tapered end, an interior flue within said drum, a damper to said interior flue, a rod for said damper forming a support for said interior flue, stays on said interior flue adapted to hold it in alinement with said collar, a baffle extending from said interior flue whereby a contracted flue-space is formed adjacent the wall of said drum, a scraper engaging the wall of said drum adapted to be shifted to remove obstruction from said contracted flue-space, and means for operating said scraper.

5. In a radiator, a drum, a tapered end on said drum, a collar on said tapered end, an interior flue within said drum, a damper to said interior flue, a rod for said damper forming a support for said interior flue, stays on said interior flue adapted to hold it in alinement with said collar, a baffle extending from said interior flue whereby a contracted flue-space is formed adjacent the wall of said drum, a scraper having flanges engaging the wall of said drum adapted to be shifted to remove obstruction from said contracted flue-space, and means for operating said scraper.

6. In a radiator, a drum, a tapered end on said drum, a collar on said tapered end, an interior flue within said drum, a damper to said interior flue, a rod for said damper forming a support for said interior flue, stays on said interior flue adapted to hold it in alinement with said collar, a baffle extending from said interior flue whereby a contracted flue-space is formed adjacent the wall of said drum, a scraper engaging the wall of said drum adapted to be shifted to remove obstruction from said contracted flue-space, an agitator on said scraper, and means for operating said scraper.

7. In a radiator, a drum, a tapered end on said drum, a collar on said tapered end, an interior flue within said drum, a damper to said interior flue, a rod for said damper forming a support for said interior flue, stays on said interior flue adapted to hold it in alinement with said collar, a baffle extending from said interior flue whereby a contracted flue-space is formed adjacent the wall of said drum, a scraper having flanges engaging the wall of said drum adapted to be shifted to remove obstruction from said contracted flue-space, an agitator on said scraper, and means for operating said scraper.

8. In a radiator, a drum, a tapered end on said drum, a collar on said tapered end, an interior flue within said drum, a damper to said interior flue, a rod for said damper forming a support for said interior flue, stays on said interior flue adapted to hold it in alinement with said collar, baffles extending from said interior flue whereby a lodging place is formed for deposits of the products of combustion and a contracted flue-space is formed adjacent the wall of said drum, a scraper engaging the wall of said drum adapted to be shifted to remove obstruction from said contracted flue-space, and means for operating said scraper.

9. In a radiator, a drum, a tapered end on said drum, a collar on said tapered end, an interior flue within said drum, a damper to said interior flue, a rod for said damper forming a support for said interior flue, stays on said interior flue adapted to hold it in alinement with said collar, baffles extending from said interior flue whereby a lodging place is formed for deposits of the products of combustion and a contracted flue-space is formed adjacent the wall of said drum, a scraper having flanges engaging the wall of said drum adapted to be shifted to remove obstruction from said contracted flue-space and means for operating said scraper.

10. In a radiator, a drum, a tapered end on said drum, a collar on said tapered end, an interior flue within said drum, a damper to said interior flue, a rod for said damper forming a support for said interior flue, stays on said interior flue adapted to hold it in alinement with said collar, baffles extending from said interior flue whereby a lodging place is formed for deposits of the products of combustion and a contracted flue-space is formed adjacent the wall of said drum, a scraper engaging the wall of said drum adapted to be shifted to remove obstruction from said contracted flue-space, an agitator on said scraper, and means for operating said scraper.

11. In a radiator, a drum, a tapered end on said drum, a collar on said tapered end, an interior flue within said drum, a damper to said interior flue, a rod for said damper forming a support for said interior flue, stays on said interior flue adapted to hold it in alinement with said collar, baffles extending from said interior flue whereby a lodging place is formed for deposits of the products of combustion and a contracted flue-space is formed adjacent the wall of said drum, a scraper having flanges engaging the wall of said drum adapted to be shifted to remove obstruction from said contracted flue-space, an agitator on said scraper and means for operating said scraper.

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